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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/925,008  | 08/09/2001  | Heejune Ahn          | K-0310              | 3596             |
| 34610   | 7590        | 07/23/2004           | EXAMINER            |                  |
| FLESHNER & KIM, LLP<br>P.O. BOX 221200<br>CHANTILLY, VA 20153 |             |                      | NGUYEN, JOSEPH D    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2683                |                  |

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/925,008

Applicant(s)

AHN, HEEJUNE

Examiner

Joseph D Nguyen

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2683

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani et al. (6,574,211) in view of Parkvall et al. (6,542,736).

Regarding claim 1, Padovani et al. discloses a method of selecting a base transceiver system in a communication system (col. 4 lines 25-42), comprising:

a) at least one base transceiver system (base station), providing to a mobile station load information (capacity) that is a receiving probability of a signal (fig. 4-5, col. 4 lines 11-43, and col. 32 lines 38-67).

b) the mobile station selecting a certain base transceiver system with which the mobile station will communicate using the provided load information and the decided forward data transmission rate (col. 4 line 25 thru col. 5 line 10); and

However, Padovani et al. does not specifically disclose b) the mobile station deciding a forward data transmission rate, and the mobile station requesting the forward data transmission to the selected base transceiver system.

Parkvall et al. teaches the mobile station deciding a forward data transmission rate according to a channel state of the signal received from the base transceiver

Art Unit: 2683

system (fig. 11-12, col. 11 line 50 thru col. 12 line 4), and the mobile station requesting the forward data transmission to the selected base transceiver system (col. 4 lines 34-38). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Padovani et al. system with the teaching of Parkvall et al. of the mobile station deciding a forward data transmission rate and forward data transmission to the base transceiver system in order to selecting the best base transceiver to forward the data to the mobile station.

Regarding claim 2, Parkvall et al. further discloses the method as claimed in claim 1, wherein the receiving probability is in reverse proportion to the number of mobile stations which the base transceiver system includes as its active set (current) (abstract, fig. 6-8, col. 8 line 55 thru col. 10 line 65).

Regarding claim 3, Parkvall et al. further discloses the method as claimed in claim 1, wherein the receiving probability is determined from a "value obtained by dividing a length of a slot that received data by a length of a slot that requests the data to the specified base transceiver system." (sector/rate) (abstract, fig. 3, 10, col. 10 line 66 thru col. 12 line 4).

Regarding claim 4, Parkvall et al. further discloses the method as claimed in claim 1, wherein the receiving probability becomes different according to a kind of service and priority of the data received from the base transceiver system (col. 6 lines 20-67).

Regarding claim 5, Parkvall et al. further discloses the method as claimed in claim 1, wherein the load information is transmitted to the corresponding mobile station

Art Unit: 2683

using a synchronous control channel, asynchronous control channel, or dedicated channel (fig. 4, col. 1 lines 36-53, and col. 7 line 28 thru col. 8 line 34).

Regarding claim 6, Parkvall et al. further discloses the method as claimed in claim 1, wherein selecting a certain base transceiver system further comprises:

a) multiplying the load information provided for each base transceiver system by the forward data transmission rate determined for each base transceiver system (col. 8 lines 35-64);

b) comparing values calculated for the respective base transceiver system with one another (fig. 6-7, 10-11, col. 4 line 35 thru col. 5 line 12); and

c) selecting the base transceiver system having the largest value according to a result of comparison (col. 2 line 63 thru col. 3 line 15, col. 4 line 55 thru col. 5 line 12, and col. 8 line 35 thru col. 11 line 67).

Regarding claim 7, Parkvall et al. further discloses the method as claimed in claim 1, wherein the respective base transceiver systems belong to the active sets activated by the mobile station (fig. 8, col. 10 lines 34-48).

Regarding claim 8, Parkvall et al. further discloses the method as claimed in claim 1, wherein the mobile station requests the forward data transmission to the base transceiver system through a data rate control (DRC) channel of a reverse link (fig. 4-12, col. 7 lines 28-43).

Regarding claim 9, Parkvall et al. further discloses the method as claimed in claim 8, wherein the data transmission rate information of a forward link to be transmitted from the base transceiver system (abstract, col. 6 line 37 thru col. 7 line 27),

Art Unit: 2683

and the information on the base transceiver system selected by the mobile station are inserted into and transmitted through the DRC channel (fig. 4-12, col. 7 lines 28-43, col. 9 line 18 thru col. 10 line 33).

Regarding claim 10, Parkvall al. al. further discloses the method as claimed in claim 1, further comprising:

a) the base transceiver system receiving the DRC channel transmitted from the mobile station (fig. 4, 6-12, col. 7 lines 28-43);

b) the base transceiver system checking the mobile station that completes the DRC channel transmission until " $(\text{present slot time}) - 1 - (\text{present slot time mod (DRC channel length)})$ " (fig. 4, 6-12, col. 7 lines 27-43);

c) the base transceiver system determining the data transmission scheduling for one among the checked mobile stations according to the received DRC channel information (col. 10 lines 4-33); and

d) performing the data transmission according to the data transmission rate requested by the corresponding mobile station according to the scheduling, (col. 10 lines 4-33).

Regarding claim 11, Padovani et al discloses a method of selecting a base transceiver system in a communication system (col. 4 lines 11-43), comprising:

a) receiving probability information and channel state information through a forward link (fig. 4-5, col. 4 lines 11-34, and col. 32 lines 53-67);

b) estimating a forward data transmission rate corresponding to the channel state information (col. 15 line 55 thru col. 16 line 29);

c) selecting a corresponding base transceiver system in which the estimated forward data transmission rate (col. 4 lines 25-43) and a value proportioned to the receiving probability in an active set become maximum (col. 4 line 25 thru col. 5 line 10, and col. 20 line 34-67).

d) requesting a forward data transmission to the selected base transceiver system (col. 4 lines 25-43). However, Padovani et al. does not specifically disclose requesting a forward data transmission to the selected base transceiver system.

Parkvall et al. teaches requesting the forward data transmission to the selected base transceiver system (col. 4 lines 34-38). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Padovani et al. system with the teaching of Parkvall et al. of requesting a forward data transmission to the base transceiver system in order to selecting the best base transceiver to forward the data to the mobile station.

Regarding claim 12, this claim is rejected for the same reason as set forth in claim 2.

Regarding claim 13, this claim is rejected for the same reason as set forth in claim 3.

Regarding claim 14, this claim is rejected for the same reason as set forth in claim 4.

Regarding claim 15, this claim is rejected for the same reason as set forth in claim 5.

Regarding claim 16, Parkvall et al. further discloses the method as claimed in claim 11, wherein the receiving probability information is transmitted to corresponding mobile stations in case that the corresponding base transceiver system is included in an active set of a new mobile station (MT1 is old and MT2 is new) (fig. 5-12, col. 8 line 25 thru col. 10 lines 65).

Regarding claim 17, Parkvall et al. further discloses the method as claimed in claim 11, wherein the receiving probability information is transmitted to corresponding mobile stations in case that the active set is changed over a threshold value (col. 7 lines 1-15, and col. 8 line 65 thru col. 9 line 35).

Regarding claim 18, Parkvall et al. further discloses the method as claimed in claim 11, wherein the receiving probability information is periodically transmitted to corresponding mobile stations according to a timer, or non-periodically transmitted according to a request of the corresponding mobile station (col. 8 line 43 thru col. 10 line 3).

Regarding claim 19, Parkvall et al. further discloses the method as claimed in claim 11, wherein the mobile station is a mobile station that can perform data transmission/reception with at least two base transceiver systems (fig. 5, col. 8 lines 43-54).

Regarding claim 20, Parkvall et al. further discloses the method as claimed in claim 11, further comprising the steps of:

a) calculating (error performing) a bit error rate or packet error rate from the channel state information (fig. 4, col. 6 line 50 thru col. 7 line 43); and



Art Unit: 2683

b) determining the data transmission rate according to the calculated bit error rate or packet error rate (fig. 4, col. 6 line 50 thru col. 7 line 55, col. 11 lines 11-25).

Regarding claim 21, Padovani et al. discloses a method of selecting a base transceiver system in a mobile station (col. 4 lines 25-43), comprising:

a) receiving load information corresponding to each of a plurality of base transceiver systems (fig. 5, col. 4 lines 11-43, and col. 32 lines 53-67);

b) deciding a data transmission rate based on channel state information (col. 7 lines 6-48);

c) selecting a base transceiver system from among said plurality of base transceiver systems using said received load information and said data transmission rate (col. 4 line 25 thru col. 5 line 10, and col. 32 lines 38-67); and

d) establishing data transmission (communicating) with said selected base transceiver system (col. 5 lines 45-56, and col. 12 lines 34-47).

However, Padovani et al. does not specifically disclose deciding a data transmission rate.

Parkvall et al. teaches the mobile station deciding a data transmission rate based on channel state information (fig. 11-12, col. 11 line 50 thru col. 12 line 4. Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Padovani et al. system with the teaching of Parkvall et al. of the mobile station deciding a forward data transmission rate to said base transceiver

Art Unit: 2683

system in order to select the best base transceiver to receive forward data to the mobile station.

Regarding claim, Padovani et al. further discloses the method of claim 21, wherein said load information of each of at least one base transceiver system is a receiving probability of a signal (col. 4 lines 25-29, and col. 32 lines 53-67).

Regarding claim 23, this claim is rejected for the same reason as set forth in claim 2.

Regarding claim 24, this claim is rejected for the same reason as set forth in claim 3.

Regarding claim 25, this claim is rejected for the same reason as set forth in claim 4.

Regarding claim 26, this claim is rejected for the same reason as set forth in claim 6.

Regarding claim 27, this claim is rejected for the same reason as set forth in claim 7.

Regarding claim 28, this claim is rejected for the same reason as set forth in claim 8.

Regarding claim 29, Padovani et al. further discloses the method of claim 21, wherein said load information is receiving probability information (col. 32 lines 38-67).

### ***Response to Arguments***

Art Unit: 2683

3. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

703 308-9051, (for formal communication intended for entry)

Or:

Art Unit: 2683

(703) 305-9509 (for informal or draft communications, please label  
"PROPOSED" OR "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA. Sixth floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Joseph D Nguyen whose telephone number is (703)  
605-1301. The examiner can normally be reached on 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, William Trost can be reached on (703) 308-5318. The fax phone numbers  
for the organization where this application or proceeding is assigned are (703) 872-9314  
for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the receptionist whose telephone number is (703) 306-  
0377.

Joseph Nguyen



Jul. 16, 2004



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600